NON-TWISTING AND NON-FLIPPING NECKLACE

Background of the Invention

This invention relates to necklaces, including those carrying decorative gemstones. In some arrangements, the necklace is a series of links having settings for the gemstones. Along the length of the chain, as it traverses around the wearer's neck, the links need to be oriented such that the gemstones face outwardly, i.e., away from the wearer. Should a portion of the necklace flip or twist, the gemstones in that portion will then be facing either towards the wearer's skin or perhaps at an angle (e.g., 90°).

Conventionally, the design of the links do little to prevent the necklace from flipping or twisting. However, by providing a combination of links, where some of the links enable articulation in one direction (or, in one plane) with respect to the length of the chain while others enable articulation in another direction at some angle with respect to articulation of the prior links (or, another plane), flipping and twisting can be prevented. In one implementation, the articulation of one set of links is restricted to the vertical plane, i.e., up and down with respect to the links, and the articulation of another set of links is restricted to the horizontal plane, i.e., side to side with respect to the links.

Brief Description of the Drawings

Figure 1 is a drawing of a necklace;

Figures 2 and 3 are drawings of necklace links enabling vertical articulation;

Figures 4-6 are drawings of segments of three links enabling vertical articulation;

Figures 7 and 8 are drawings of necklace links enabling horizontal articulation;

Figures 9-11 are drawings of segments of three links enabling horizontal articulation;

Figures 12 and 13 are drawings of interconnecting links enabling both horizontal and vertical articulation;

Figures 14-19 are drawings of segments of three links incorporating an interconnecting link joining links enabling either horizontal or vertical articulation; and

Figure 20 is a drawing of a necklace indicating the deployment of the various types of links.

Description of the Invention

Figure 1 shows a necklace 10 comprising a combination of links that resists flipping and twisting. A clasp 12 completes the necklace 10.

One type of link 20, illustrated in Figures 2 and 3, enables articulation vertically or up-and-down, i.e., in the vertical plane of the link 20, with respect to its length (designated by the arrow "L"). The dashed line labeled "vertical" lies in the vertical plane with respect to the length of the link. Each such vertically-articulating link 20 has a first hinge element 22 and a second hinge element 24 that mates with the appropriate hinge elements 24 and 22, respectively, of other similar links 20 to enable such vertical or up-and-down articulation, as illustrated in Figure 4 (links separated), Figure 5 (links joined), and Figure 6 (links with articulation). By virtue of the action of the hinge elements 22 and 24, the vertically-articulating link 20 restricts articulation to the vertical plane.

Another type of link 30, illustrated in Figures 7 and 8, enables articulation horizontally or side-to-side, i.e., in the horizontal plane of the link 30, with respect to its length (designated by the arrow "L"). The dashed line labeled "horizontal" lies in the horizontal plane with respect to the length of the link. Each such horizontally-articulating link 30 has a first hinge element 32 and a second hinge

element 34 that mates with the appropriate hinge elements 34 and 32, respectively, of other similar links 30 to enable such horizontal or side-to-side articulation, as illustrated in Figure 9 (links separated), Figure 10 (links joined), and Figure 11 (links with articulation). By virtue of the action of the hinge elements 32 and 34, the horizontally-articulating link 30 restricts articulation to the horizontal plane.

Additionally, the necklace 10 may also contain interconnecting links 40 and 50, shown in Figures 12 and 13, respectively. The first such interconnecting link 40 (Figure 12) has a first hinge element 42 that enables horizontal or side-to-side articulation and a second hinge element 44 that enables vertical or up-and-down articulation. The second such interconnecting link 50 (Figure 13) has a first hinge element 52 that enables vertical or up-and-down articulation and a second hinge element 54 that enables horizontal or side-to-side articulation.

The first interconnecting link 40 is shown in a segment of three links - a vertically or up-and-down articulating link 20 followed by the first interconnecting link 40 and then a horizontally or side-to-side articulating link 30, separately in Figure 14, coupled together in Figure 15, and then articulated in Figure 16. (The dashed lines labeled "vertical" and "horizontal" lie in the vertical and horizontal planes, respectively, with respect to the length of the link.)

The second interconnecting link 50 is similarly shown in a segment of three links - a horizontally or side-to-side articulating link 30 followed by the second interconnecting link 50 and then a vertically or up-and-down articulating link 20, separately in Figure 17, coupled together in Figure 18, and then articulated in Figure 19.

In its most basic form, the necklace 10 will comprise a number of vertically (or up-and-down) articulating links 20 and a number of horizontally (or side-to-side) articulating links 30. Where the necklace 10 lays against the neck, the vertically or up-and-down articulating links 20 permit the necklace 10 to follow the contour of the neck. Below the neck, the necklace 10 should lay flat against the wearer's chest, which is achieved by utilizing horizontally or side-to-side articulating links 30. Because any given coupling of links 20 or 30 will allow articulation in only one manner, either in an up-and-down or a side-to-side fashion, the necklace 10 will resist flipping or twisting.

The actual number of each type (links 20 and links 30) depends in part on the length of the necklace 10 and the circumference of the wearer's neck. An equal number of each (links 20 and links 30) will work satisfactorily but a different ratio of links 20 and 30 could be employed as suits the application, for example,

in a lengthy necklace where a substantial portion of the necklace 10 lays against the chest as opposed to against the neck of the wearer.

The necklace 10 is shown again in Figure 20. The first and second interconnecting links 40 and 50 join the vertically or up-and-down articulating links 20 on the upper portion 14 of the necklace 10 (the top portion of the page) to the horizontally or side-to-side articulating links 30 on the lower portion 16 of the necklace 10. Again, the necklace 10 is completed by a clasp 12 which substitutes for one of the vertically or up-and-down articulating links 20. Recalling the directional references of Figures 2, 7 and 12, the necklace lies of Figure 20 lies in the horizontal plane while the vertical plane is perpendicular to the page.

In the figures, the links are shown in various sizes, alternating between large and small. One may use different size links to accommodate different sizes of gemstones or, should the gemstones all be equal in size, then the links may also be of equal dimensions.

In lieu of using the first and second interconnecting links 40 and 50 to interconnect the vertically articulating links 20 to the horizontally articulating links 30, a coupling device consisting of a hinge element that enables horizontal or side-to-side articulation and a second hinge element that enables vertical or

up-and-down articulation would be sufficient to interconnect the links of differing articulation, without the need to accommodate a gemstone. Further, the other links of the necklace 10 could also assume a different form and not carry gemstones, i.e., all metal.